1: Handgames K-S (1963-1965) 1965 MD12 Mahone MD12

[509] light enough to carry wherever an article of corresponding size is to be manufactured. An object to be fabricated in dimensions to match another article may also be compared to the latter by means of a length of string to which a knot is tied at the required length. Thus in the construction of a coffin, the length and width of the deceased were observed to be taken with a piece of string. The height of the reclining body, however, was ignored, hence the coffin was made too low.

[412] [410] Wedges for splitting wood are manufactured as required. They are cut from the lower portion of a black spruce sapling and sharpened with an ax to a long tapering blade. Chips of wood are used as wedges in whip sawing. The butt of a long handled ax head is used as a maul.

[415] [340] The implements associated with most tables are a broom, funnel, and a dustpan cut from a five gallon oil can. One family used an eight wing as a whisk broom. When cooking a deer on open fires, the ten stick is an indispensible piece of household equipment. It consists of a green willow pole, five or six feet long and as nearly as may be in its present diameter. The heavier section of the pole is sharpened and thrust into the ground at a forty-five degree angle to the fire. The upper section of the pole is notched for the handle of the kettle. The pole may be turned aside from the fire in removing the vessel. In a few days, when the ground becomes too soft to support the pole, a rock may be placed on top of the buried portion of the wood and another stone thrust into the open notch by the pole as it leaves the ground. The poles are discarded when they become dry or charred. When more is wanted in front of open fires smaller poles, about three feet high are cut, and thrust into the ground almost vertically, the meat being hung on a sharpened point.

[417] [340] A considerable amount of apparatus is manufactured. In front of each cabin is found a workrack for sawing wood. This consists of a bolting about six inches in diameter and five or six feet long. Close to each end two spruce saplings, about four feet long and an inch and a half in diameter, are driven into the ground so that they cross each other at about a thirty degree angle. The wood to be sawed is placed in these angles. The bolting is sometimes also used in splitting sawed lengths of wood. In the bark near the settlement are one or more saw pits. Saddles are made to rock astride. The rungs are either set in holes or nailed to side pieces. At either end of the saddle braces are nailed to the side pieces of handles. For compressing, a blind vise is bradled with an ax and mixed on two stumps to serve as a workbench. Another piece of apparatus is used for bending green handles in the manufacture of toboggans and sleds (Fig. 3, c, and Pl. 6, c). About six feet long, this consists of the lower trunk and part of the root of a spruce tree. Unnecessary portions of the root and trunk are trimmed away so that the wood exhibits a natural curve which is lowered and placed on the upper surface. Two poles, about two inches in diameter, are nailed to either side of the trunk. When thus prepare a few inches in front of the root, a completed sleeve eighteen inches long is bolted. The space between the root and trunk holds the handle inserted for bending.

[414] [412] Traps, which are an important category of capital goods, are generally purchased, but a few men still build deadfalls or set nets or snares for wolf and coyote. A trapper generally owns from thirty to fifty steel traps of various sizes some of which are given to

talk which is to be closed. Another pole is placed across the lower portion of the forked poles forming poles and baked in position. The skin is then portioned and fastened to the frame. When hides are to be softened, they are fixed on a smaller frame, consisting of four poles, in which the side poles are anchored in the ground perpendicularly (Pl. 6, a).

Construction of mats (gyaanna) and all mat making is done by men. Young girls sometimes make strainers for squeezed skin and women commonly erect the poles for stretching and softening cowskins.

Machines employed by the Kaka have either been purchased from traders or obtained from white sources. Among the machines in the Kaka category are sewing machines, owned by women but purchased by men, and outboard motors, the property of men. A pulley is a common possession and in the fall a seal is conjunction with an improvised winch to pull boats out of the water. The winch is made by driving two poles about four inches in diameter and five feet long into the ground about six feet apart. Each pole is grooved on the side which is away from the water and about six inches from the top. A smooth green pole, about four inches in diameter, is fitted over these grooves to serve as a winch. The pull of the boat is sufficient to keep the winch from slipping out of the grooves. A handle is made by lashing a green spruce pole, about two feet long and two inches in diameter, at right angles to the winch.

Every household uses such cooking utensils as frying pans, straight bottles varying in size from one to five quarts, coffee pots, bowls, plates, cups, silver plated spoons and forks, steel knives, and washtubs. A few families have also accumulated stone cups and dishes. Bottles and jars are generally saved for storing berries and may also function as baby bottles, washbasins, and sugar bowls. The fifty pound drums in which dehydrated milk is purchased are used to store rice and flour. Empty sugar and flour sacks are widely used to contain tea, rice, meat, and many other commodities. Discarded oil cans are used for storing grease and kerosene.

Commercially manufactured utensils include mosquito gun cases, embroidered with silk thread, napkin cases, made of scraps of cotton cloth, sewing box of silver lined with pockets and embroidered with silk thread, and envelopes of birch bark containing stamps or provided letter covers.

Productive capital. In general the producer goods needed by an individual or family, both home constructed and purchased, are found in every settlement. They each family is in an equal position to secure or create necessary consumer goods. Even if an object is not owned by an individual, it may generally be borrowed from others within the native settlement or from nearby neighbors. If not immediately required by the owner, such articles are readily loaned, and one is rarely at more disposition. If an outboard motor is loaned, the borrower is only expected to supply his own gasoline. When dogs are loaned, it is with the understanding that they will be reasonably well fed and otherwise cared for. In short, the necessary productive capital is widely distributed or generally accessible.

[illegible] ACTIVITIES

During nine or more months of the year, from the middle of August till late in May, the Kaka Indians are entirely occupied in exploiting the resources of land and fishing activities

before subsequent poles were placed in position. After each pole was placed in position, it was tightly bound along the upper and lower surfaces (Pl. 6, c). The two functions involved the above five levels.

A very old Hopi resident above Oraibi and finished the walls of the new house. He had the logs in a heights of five poles, as above mentioned, and explained that thatching would be done after the shelter was completed. When all the poles had been set in place, Hopi proceeded to run a short cord, running through the first three logs and about nine inches [illegible] were log. On this log the framework of the entrance was walled. The entry was set about two feet wide.[1] After the logs had been run through, they were fastened on both sides of the entry. A framework and door were then constructed out of several poles, the door being mounted in the middle of the door post with deer-sinew[illegible] hinges, five inches long and one and a half inches wide (Fig. 4, c). A simple bolt was made out of a piece of poplar, five inches long, one and a half inches wide, and one inch thick. A single cord was used to secure the bolt to a loop on the doorpost. The bolt was could be turned to make a bill across the door, thus locking the latter from the inside.

When Hopi finished the door he began to level the ground within the new house. Using an ax he removed roots and dug out earth. In this process he duplicated the floor level of the [illegible] was a five inches below the house log. A few days he rose into the walls and secured two forked poplars on which to support the ridge pole. The latter consisted of a straight and young about two inches in diameter. The supporting poles were placed about fifteen inches in front and in back of the new house. When one was taken in planting these poles Hopi is usually taken the a wall near at hand. The poles were also higher than would because of the fact that the new house allows the men to run a foot or so above the ground. To fill the ridge pole with the new [illegible] were used a forked stick, one foot long. When the ridge pole was in position Hopi discovered it was too high. The supporting poles therefore had to be cut several inches. Two poles were set outside of the structure to support the walls of the new. The second living room of the house, which it was added against the south wall, above walls of burned sprout saplings. Hopi worked above eight hours.

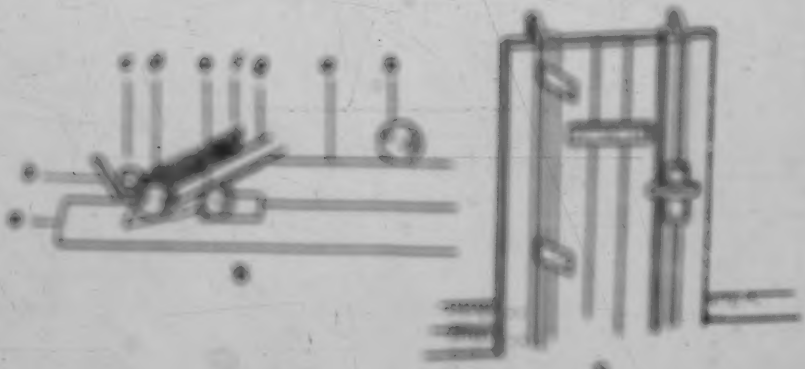
Houses. There are several types of houses. Classified according to materials and construction, there are houses of wall several [illegible] and houses of logs. Considered with regard to [illegible], there are house cabins located in the extreme northeastern, which are occupied [illegible] from September to April; then cabins built in the brush, which are temporarily occupied while a men and his family are living on the crop line, and summer houses which some families occupy while living at Lower Pole during the summer (Table 3).

TABLE 3. RELATIONSHIP OF HOUSE STRUCTURE TO HOUSE FUNCTION

House Types	Utilized Annual Location	Use
Stone Cabins	Mesa tops, especially those east and south of village; [illegible] these have now practically	Used almost exclusively with the exception noted in following column
Log Cabins	Mesa tops	Used exclusively
Summer Houses	Used almost exclusively	Formerly used but now abandoned

[1] When the finished new is plan the new ground is to the square, and this provided considerable [illegible]

PAC
ND1
333



4: Honigmann E-5 (1943-1945)1954 ND12 Nahane ND12
Upper Liard

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bone splinters. Needles with eyes appear to have been manufactured prior to contact, their use being aided by a "thimble" consisting of a flat piece of bone held in the palm. The bone arrow points will be described in connection with weapons.

As already indicated, bone from mountain sheep, goats, and caribou found a place in the technology. To prepare spoons and blades from goat or sheep horn the material was boiled until soft, split with a crow ax, and then shaped with a stone knife. Without previous boiling, caribou horn could be sharpened (by grinding?) to provide an adze or scraper with an edge sharp enough to cut through the hide on a caribou hide. The sharp point of a caribou horn made a useful tool for drilling through wood. Another drill consisted of a beaver tooth mounted in a wooden handle.

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Although objects of wood and bark played important roles in daily living, woodworking remained a relatively undeveloped industry carried out with simple apparatus. Spruce appears to have been the most frequently used wood. The available cutting tools made it relatively impossible to cut down any tree larger than a sapling so that older trees had to be weakened by firing the base. Then came the problem of cutting the trunk into planks of desired length and thickness. A felled tree was split with a hardwood wedge driven with a maul made by lashing a heavy stone to a wooden handle.* In the course of using a maul of this type a man sometimes chanted "go gah, go gah," the chants urging the lashing around the head of the maul to remain strong and not to loosen. Fabrication of the resultant planks into snowshoes, snow shovels, handles, and other objects diminished use of the cutting tools previously described. Spruce bark provided a variety of objects ranging from canoes to drinking and storage vessels. Large pieces of bark were often peeled by a skilled man who, after selecting a suitable tree, climbed into it on a ladder consisting of a sprue sapling bound into the branches. After clearing the trunk of branches to cut a girth around the tree with a caribou-horn adze. He then split the bark lengthwise for about four feet and pealed it free from the trunk with a wooden barking tool fitted with a crook. This implement partly encircled the tree, under the bark. The loosened sheet was tied in place around the trunk with babiche line while the worker lengthened the split downward by cutting. This continued until the bottom of the tree was reached. Then another girth was cut and from the ground several men now pulled the strip halvelse from the tree. The looking at the top of the piece had been left loose enough to permit the large sheet to gradually slip down as the men drew the lower edges free. White birch bark, scarce along the upper Liard River, found little place in technology.

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From the pelts of skin animals the people secured garments, sleeping robes, and storage bags. First, however, the skins had to undergo processing to render them fit for these purposes. For several days squirrel skins were soaked in water and then scraped with a crude knife to remove the fat and perhaps some hair. Beaver skins were dried and stretched on oval frames of willow very similar to the type still in use. People scratched lynx, fox, muskrat, and similar pelts, pealed whole from the animal's body, over form boards that slipped into the skins. Rabbit skin, intended for cutting up into piecing fur, could be best dried

* Skilled stone adze boatmen as well as plain wooden mauls are specified as have been made by the Tlingit. Swanton, *Tlingit Myths and Texts*, 1909, Bureau of American Ethnology Bulletin 39, p. 391.

6: Honigmann E-5 (1943-1945)1954 ND12 Nahane ND12
Upper Liard
Dease River

In warm weather lost for a week during winter. Summer babiche broke easily in comparison to the winter variety. Cold weather drying also rendered the line softer and more flexible. Stretching frames for drying babiche were not generally used, although for hasty drying such line might be wrapped around a snowshoe. From July to mid- and evening kids came smoked-skin line, of whose manufacture little need be said. Men collected the roots for spruce-root cordage but all subsequent stages of manufacture were carried out by women who scraped the roots with a stone knife and then boiled them for about half an hour. The worker then split each root, smaller roots being split only once but very thick roots four times. Occasionally spruce roots were braided. This line kept best when loosely hung up and tended to spoil if wound tightly. When spruce roots became hard and dry, they could be softened with grease but urine was never used for this purpose. While willow line, made in emergencies to pack meat, consisted of a long willow branch softened by heating over fire and then twisted until the fibers had been well broken. Willow bark line found a host of uses and yielded material for fish nets. Willow roots, collected by men, were softened through an hour's boiling, split, and then used for cordage. To manufacture green line women gathered the high sedge growing along lake shores, bundled into sheaves for transportation back to camp, the material had to be fabricated quickly before it dried. Twisting converted the green wet line that remained useful for only a short period of time. When confronted with the information that the Tahltan had woven goat's wool into blankets our informant (O) opined that the Kaska must have done the same thing.[1] Among the knots commonly applied to the foregoing types of cordage are the running noose, bowline, and overhand. Two ends of babiche were spliced by means of a short braid.

Dease River Kaska. Stone tools constituted the basic equipment in the Dease River area. A flint-like stone as well as obsidian provided materials for blades which were then hafted in handles of horn or spruce and birch wood. Sinew or babiche line secured the hafting. To prevent blades men or women manufactured sheaths from smoked caribou hide. The carvenors oriented under the outer belt of a person's garments. Although a woman had her own knife its form did not differ from the man's and the objects were designated by a common term. Before beginning to chip stone a man might swing a bullroarer while repeating the song, "Hanuda, hanuda." The charm caused his magical genius to aid him in the work.

Concerning work in clay, we found it impossible to check the testimony of one informant (S) that vessels used to be shaped from this substance and hardened by firing.

The rawhide or goat's horn adze served as a basic tool for woodworking and stone ones were denied. Men split logs with wooden wedges and used spruce-hooking tools to assist them in pealing spruce bark.

Bone constituted an important material for knife blades, the material being "scraped" to an edge and hafted in a horn or wooden handle. Women used skin fleshers derived from the leg bone of the caribou as well as obsidian scrapers for removing the hair of a hide. Leveling needles of fish bone are said to have been of recent introduction, supplanting bone awls. Unpronounced stones have provided an ice chisel as well as material for

[1] Teit, *the Tahltan* (Abbreviated) Work (1912), 401.

6: Honigmann E-5 (1943-1945)1954 ND12 Nahane ND12
Upper Liard

blueberry. Other vegetable products taken from the land included fern roots in spring; 222
lily bulbs; mushrooms, frequently stolen from a squirrel's cache; muskeg apples, that 224
grew up in the mountains and were described as tasting somewhat like turnips; wild 262
onions, of which only the greens were eaten; rose petals, made into a beverage by boiling; and wild rhubarb. Both sexes chewed gum taken from a "ball dead" spruce tree, a choice advised by the fact that such gum would not stick to the teeth. Jack pine and spruce limbs were also eaten but used, birch fiber, willow buds, wild rice, and wild peas held no place in the diet. Birch sap, obtained by tapping the birch in spring, rendered as [310]
a minor delicacy but people ignored poplar sap. Children kept the camp supplied with water, securing it from the river or in the form of snow. Warmed moose milk was sometimes drunk.

Flesh food could be secured with the least expenditure of energy by setting traps, 224
including snares, deadfalls, nets, and, perhaps, pitfalls. For bear the Indians learned a snare made of braided babiche (as many as eight strands of semi-tanned skin line might be used) near a berry patch, while for moose and caribou he placed similar snares between trees and across the runways which these animals had made in the course of visiting drinking places and salt licks. Fences were sometimes extended from either side of a moose or caribou snare. At other times trappers thrust two forked poles into the ground and across them suspended a toggle pole twelve feet long and three inches in diameter. From the toggle hung a caribou snare while on either side a fence directed the animal into the trap. Men always set moose and caribou snares. "Even if a woman [462]
knew how to make a caribou snare she could not make it good enough." For lynx a semicircle of poles with a center opening for the snare was anchored in the ground. A single strand of babiche had sufficient strength to hold this animal. Both snares might be erected by women. In mountain gulches through which ran sheep trails men erected free toggle snares for sheep. Often the poles used in this work had to be packed long distances above timberline. Up to six strands of babiche were twisted together to make a snare line strong enough for that animal. For beaver, men (and also women) set snares of three-strand twisted babiche near a dam.

Ground log snares featured a rock toggle and required two-strand twisted babiche. 224
The family provided itself with a number of six- or seven-foot long forked poles in the 901
fall and packed them above the timberline. The trapper firmly planted one such pole for each snare in a rock ruin near a ground log dam. On either side of the pole ran a small fence about a foot high. After forming the snare loop between these fences, the snare line was bent and knotted around a small trigger stick below continuing through the fork of the pole. Halfway below the fork the line was weighted with a 20-pound rock. The trigger stick was fitted under a convenient knob or protuberance on the upright pole, the toggle's weight serving to keep it fixed until an animal entered the snare and dislodged the stick, whereupon the rock fell to the ground. The weight of the falling toggle lifted the animal off the earth. In timbered areas lifting-pole snares like those frequently used for rabbits were also set for ground hog. In fact, the rock toggle appears to represent an adaptation of the lifting-pole principle to treeless country. Men, boys, and women built ground hog snares.